Implementing a Home Smoke Detector Program for the City of Danville, KY

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, the quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

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Abstract

The Danville Fire Department has been directed by city administration to be more responsive to the community's needs and provide better programs for fulfilling those needs. During a needs assessment it was discovered that the department does not have a community risk reduction program that addresses fire safety for those over 65 years of age. A home smoke detector program was identified as a possible solution to meet those needs.

The problem is the Danville Fire Department does not have a home smoke detector program to reduce fire deaths and injuries. The purpose of this research is to qualify and quantify a home smoke detector program that can be measured and meet the needs of the community while targeting a high-risk population, such as those 65 and older.

Action research study was utilized to answer the following questions: 1) What community risk reduction programs are currently in place in the City of Danville?, 2)What are the high-risk populations within the City of Danville?, 3) Is a home smoke detector program the right program for the high-risk population?, 4) Can that program be implemented, measured and receive community support, and 5) What funding sources can be identified to implement the program?. To answer the stated questions, an analysis of the current community risk reduction programs was performed, demographics and fire loss data was examined, a review of program for high risk populations was performed, a community survey was used to determine if there was support for a program and the fire department budget and a grant search was scrutinized. The results revealed that those 65 and older were the highest risk, that a home smoke detector program funded by grants could be implemented and that a public education specialist be hired to oversee the program.

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Introduction

The Danville Fire Department has been directed by city administration to be more responsive to the community's needs and provide better programs for fulfilling those needs in tough economic times. The department began working on a needs assessment based on current levels of services provided to the community and ways to identify quantifiable programs that meet those needs while being economically feasible. During this needs assessment it was discovered that the department does not have a community risk reduction program that addresses fire safety for those over 65 years of age. To address the problem, a home smoke detector program was identified as a possible solution to meet those needs.

The problem is the Danville Fire Department does not have a home smoke detector program to reduce fire deaths and injuries. The purpose of this research is to qualify and quantify a home smoke detector program that can be measured and meet the needs of the community while targeting a high-risk population, such as those 65 and older. This is in direct relation to the United States Fire Service Administrative operational objectives to reduce the loss of life for from fire related deaths to those 65 years and older. This study also was designed to meet the National Fallen Firefighters Foundation Life Safety Initiative #14: Public education must receive more resources and be championed as a critical fire and life safety program.

The purpose of this study is to define and implement a home smoke detector program and for that program to target a high-risk population(s) within the community. An action research method approach was used to answer the following questions:

1. What community risk reduction programs are currently in place in the City of Danville?
2. What are the high-risk populations within the City of Danville?

3. Is a home smoke detector program the right program for high-risk population(s) identified?
4. Can a home smoke detector program be implemented, measured and receive community support?
5. What funding sources can be identified to implement the home smoke detector program?

Background and Significance

The City of Danville is a small town in central Kentucky with a residency population of 15,524 and a daytime population of 23,261 covering 15.88 miles. The City is a regional employment, healthcare and retail hub for surrounding counties and has several light industries that provide jobs for surrounding counties. The City has a paid-combination fire department that has been in service for over one hundred years. The fire department provides fire, rescue and hazardous material response, as well as support to the Boyle County Emergency Medical Services, which provides the local ambulance service. The economy is a mix of small industrial and farming.

The Danville Fire Department (DFD) has two stations, five apparatus and responds to an average of 548 runs per year. DFD employs 25 full-time positions, one civil service position and 15 part-time firefighter positions. One full-time position is designated as the fire marshal position and holds the rank of battalion chief. The fire marshal responsibilities include fire inspections, fire prevention and fire investigation. Suppression personnel assist the fire marshal in his duties when needed.

The department community risk reduction program includes school visits in October, providing station tours, working with local businesses during safety events and providing fire extinguisher use programs. The department currently does not offer any other type of community risk reduction plan, such as a home smoke detector installment program. The only other program offered in the terms of risk reduction is a car seat safety and installation program.

The history of the major fire prevention effort within the City of Danville includes several non-correlated efforts. In 1997, the department approached the city commission with a partnership with Lowe's Building Supply to provide a free home smoke detector program. The city commission voted down the proposal based on liability. Lowe's did donate detectors but due to the commission's vote, the detectors were donated to a neighboring fire department for their use.

In 1999, an effort was made to begin a home sprinkler advocacy program but a strong alliance of homebuilders rallied against this and the measure never was considered or adopted by the city commission. A local realtor began a mobile fire safety trailer campaign in 2000 to use private donations to purchase the trailer. The realtor was able to raise enough donations to pay for the house without taxpayer monies and then donated the trailer for all fire departments in the county to utilize with Danville Fire Department being the primary caretaker of the trailer.

None of these efforts were in direct response to tragedy that befell the community but instead because people had read or heard about these efforts in other communities and thought they were good ideas for the community. In 2006, the department performed strength, weakness, opportunities and threats (s.w.o.t.) analysis to determine where it makes a significant impact on public services with the current amount of public financing, and to determine what level of

service the fire department should provide. This analysis's focus was more on improving fire suppression and rescue service and did not address community risk reduction.

The department's staffing and activity is based on the responses and only a very small percentage of time is dedicated to fire prevention. The author in a previous paper completed for the Executive Fire Officer Program found in that paper that .83% of staff hours were used for effective fire prevention. (Ball, 2008, p. 19) Daily work load, training, and responses with a small department place many time constraints on the department and staff and because the community is small, the department is frequently called upon to handle tasks that are community oriented projects outside the traditional role of the fire department. Examples of this would be the department's annual downtown Christmas light program and the Christmas Toys fundraiser, which consume almost two months of the department's workload. Meeting the expectations of the community, and a smaller budget with multiple priorities has continually created several scheduling conflicts and resource allocations.

A hypothesis was developed that a free home smoke detector installment project would be the probable outcome of the 5-step community risk reduction model. The author spoke with Dr. Burton Clark at the National Fire Academy about the problems of not having a home smoke detector program in the City of Danville. Dr. Clark advised to setup a small pilot program and test the program to find the positives and negatives of the implementation (B. Clark, personal communication, January, 2009). The department requested additional funding for the next fiscal year to begin a program, but during the timeframe of this project, the city was faced with a major revenue shortfall and the pilot program was cut due to lack of funding. This study is part of an alternative strategy to try an implement the program.

The significance of this study is to define a measurable community risk reduction plan that justifies putting a home smoke detector program in place by dropping injury and mortality rates in high-risk populations such as those 65 and older. Furthermore it should help to educate department and city administration on where best to focus budgetary efforts in the future of fire prevention and community risk reduction.

. The research was conducted for the National Fire Academy Executive Fire Officer Program Community Risk Reduction course with recommendations of the study to assist in developing a community risk reduction plan for The City of Danville Fire Department. This is in direct relation to the United States Fire Service Administrative operational objectives to reduce the loss of life from fire related deaths to those 65 years and older by 25 %. (United States Fire Administration ([USFA], 2001, pg. 3). This study was also designed to meet the National Fallen Firefighters Foundation Life Safety Initiative #14: Public education must receive more resources and be championed as a critical fire and life safety program (Everyone Goes Homes, n.d.).

Data and part of this document was utilized in writing the grant for a free home smoke detector program through Kentucky Injury Prevention and Research Center (KIPRC). An executive summary will be forwarded to the city administration and the city commission upon completion of the peer review process.

Literature Review

The literature review for this project was an extensive search of data and information within the department as well as through the web based information. Much research has already been done in the smoke detector field and the data has been substantiated. A summary of the articles and information that was utilized in helping to define the specific subject to instituting a smoke detector program for the City of Danville is listed within this section.

Ahrens measured the trends and patterns of U.S. Fire losses, utilizing NFPA data. Only fires reported to participating municipal departments were used for this report and she did not use data from the state or federal firefighting authorities. Her report paints a definite picture of US fire trends and patterns. She defined that home fires dominated the structure fire problem and fire deaths but did not break down the age groups where the deaths occurred.

Ahrens did a second study on Smoke alarms in the U.S by using reporting data as in her first report. This report was a comprehensive study on the types, locations and occupancies and uses of smoke detectors in the United States. She found that the death rate per 100 fires was twice as high in those without a working smoke alarm as with homes with this type of protection. She did study age groups in this report and found that 350 persons 65 and older died in fires where the smoke alarm activated. 130 died in fires where a smoke detector was present but failed to activate and 280 died in fires where a smoke detector was not present. She did not report on data on how many-escaped fire due to those numbers not being available in any statistical form. She also did not report on fire departments that have home smoke detector programs and their success or failure rate.

Coleman's article was based upon the premise that fire departments must justify their existence and how they perform. His focus was aimed at the management of the fire service and he raised several questions on how the fire service must adapt and provide the services the community is willing to pay for. Fire prevention only received one question, whereas fire suppression received the lion share of the article. Coleman's article missed a major point in that he failed to address that preventing fires should be the number one goal of any community and their fire department.

Everyone One Goes Home was developed by the National Fallen Firefighters Foundation, with the goal of saving firefighter lives. There are sixteen life safety initiatives. Number 14 is placing more resources in public education and number 15 advocates the strengthening of codes and home sprinkler systems. There is no initiative for a nationwide home smoke detector program.

Foley, in his article writes about the roles and responsibilities of community leaders and citizens. The article is based on defining a fire department's suppression capabilities and how that affects the community. His aim was to make community leaders aware of what their fire departments can and cannot do. The article is from the risk analysis standpoint. His argument would have been more concise if he had included theories about how well the fire department can reduce the community's risk if it has a strong fire prevention program.

Fire loss in the United States is a statistical based document with facts and figures taken from the National Fire Protection Association incident database. This is a very detailed article that paints a picture. His facts are utilized in many publications and websites. Graphs and tables are included to enhance the finite detail. This document allows the reader to view trends and gives insight to where efforts should be made to reduce fires.

Morris's website on sampling populations is from a statistical point of view. He tries to bring understanding on sampling small populations. He included a excel spreadsheet for download that allows the user to input numbers and get the amount needed for a level of confidence to insure that a survey meets the minimum requirements in respondents. This is a very useful tool and can be used by novices and/or professionals to produce credible survey results.

The United States Census Bureau's website has several beneficial features that allow anyone to gather demographic information. American Factfinder and population finder should always be used when conducting studies that affect the community. The only downside to these tools is that the information ages quickly and new information is not available for ten years in most communities.

The United States Fire Administration Research Agenda was published in 2001 as a report for Congress. It is a basic description of what the USFA is doing and planning to do in the area of research. It sets forth the goals and objectives of the fire service by defining what the problems are and how they are being addressed. The agenda's focus has made major changes in the fire service. The major challenge to this is that the agenda is not updated often enough and does not define the terms of when a new agenda should be addressed.

Procedures

The research method utilized was the applied research methodology. The 5-step community risk reduction model was adopted to help build a model for a successful program. The author attended the course on Executive Analysis of Community Risk Reduction at the National Fire Academy and began developing a plan for risk reduction. A vision was established that the department would create a free home smoke detector program that would extend beyond the current programs currently offered. This would be a year-round comprehensive program that would focus on a high-risk population of the city that can be measured and receive appropriate funding. The research would need to focus on a wide amount of data for introspection to determine if the program should and could be implemented.

A description of programs and performance measurements that had been adopted in 2008 were reviewed to identify what had been previously completed, what had been effective and what other programs could be tailored more to affect a specific population. An evaluation of the fire marshal's duties and responsibilities was completed to determine if the program could be implemented and managed by this position.

Research was conducted on the state and national levels to determine the significance of the problem and to determine if the problem does exist within the City of Danville. This was done to measure how other similar programs across the United States had been conducted and if the programs instituted had been successful in reducing deaths in high-risk populations.

A survey was sent to the community at large via the Internet utilizing the popular website "Survey Monkey" to identify what the desire and attitudes of the citizenry were in regards to the department and what other services the department should offer. This survey was done in response to the five-step process to build support for the program in the community. (See appendix 1)

A demographic profile was completed to identify percentages of high-risk populations. Based on those numbers, a risk matrix was built, rating risks to those age groups based upon departmental National Fire Incident Reporting Data (NFIRS). After compiling the data, a risk reduction objective was formulated along with intervention strategies to proceed with the program.

An assessment of the fire prevention budgets over the last five years was completed and a breakdown of categories based upon promotional items (e.g. pencils erasers sticker, etc.), educational materials, and a other category was identified. A costs analysis was completed on the fire prevention program on a per capita basis. A comparison study of other cities was

completed by obtaining fire department prevention budgets from cities across the United States by completing an in-depth search via the internet.

Due to the current economic crisis and the city's shortfall in revenue, it was determined to explore grants and private funding to achieve implementation of the program. Several grant programs were identified at the local, state and federal level and one private funding source to give the program seed money to begin, and then to evaluate the successfulness of the program in a year's time. In the future, the city line item budget could possibly absorb some of the personnel costs.

The limitations of the study included a low response rate to the community survey, which was not representative of the city's population. To determine what number was needed to establish a correctly sampled population and to allow for a level of confidence of 95% or greater in the survey, it was determined to use the normal approximation to the binomial distribution from sampling small populations. A statistical spreadsheet was downloaded from the "Sampling Small Populations" website (Morris, E., n.d., p. 1) that allowed the author to place the residency population number in the spreadsheet. The small population sampling size ratio was determined to be 1000 persons needed to participate The survey only accounted for 258 participants missing the target by 75%.

The survey sampling did not reach a majority of the cross-section of the population of the community at large, although attempts were made through email list servers, press releases, and through social media networks such as Facebook and Twitter. The survey only reached those with computers and access to the Internet, missing those that did not have those abilities. This may have skewed the results somewhat. This was determined by looking at those that own, rent

or live with someone, with the majority being those owning a home. It was determined that survey probably missed those living in poverty or near poverty and those 65 years and older.

The demographic study utilized data for United States Census Bureau from 2000 and is nine years out of date, but based on population data from City-Data.com the population changes from 2008 could be +/- 3% (, 2003-2009, p. 1). A comparison should be done of the 2000 and 2010 data to determine what changes have occurred.

Results

What community risk reduction programs are currently in place in the City of Danville?

The department's current community risk reduction line up consists of six programs. Those programs are the fire safety education program, the fire extinguisher use program, the fire inspection program, the pre-fire plan program, outside burn permit program and the car seat installment program.

The fire prevention program includes the school visits in October, the fire safety trailer, providing station tours, working with local businesses during safety events and providing fire extinguisher/life safety programs. These types of prevention measures are aimed at pre-school and elementary age children. There are four elementary schools in Danville, two middle schools, two high schools, two private Christian schools and the Kentucky School for the Deaf that this program services. The annual fire prevention message published by the United States is used to develop a program for school age children. The curriculum used is usually purchased from The National Fire Protection Association (NFPA) to meet the school's requirements.

Every other year, the Fire Safety house exhibit is used in the kindergarten and first grade classes to provide education on how to call 911, stop, drop and roll, stay low, feel the door and

exit outside through a window. This program has been well received by the community and has also been presented to kids and adults at safety events with great success.

During Fire Prevention month in October, the schools have a one-week fall break when schools are not in session. This compresses the time for scheduling of fire prevention classes in October. Though the schedule is compressed, the program has been successful with 1400 to 1500 hundred children contacted each year through schools and events.

Fire prevention is also provided to area day cares on the level of instruction for three and four year olds. The department provides station tours to local organizations such as church groups and boys and girl scouts. The visits are usually scheduled at the organizations convenience. Station visits are also provided when citizens bring their children to visit. The visits would be more akin to show and tell events as a standard curriculum is not utilized.

The youth fire prevention outreach program along with improved building construction features has had an excellent effect within the community in reducing fire deaths of those younger than 14 years of age. Historical department incident reporting data reveals that the City of Danville has not had a 14 year old and younger fire death in twenty-one years. This would indicate that the department is meeting the USFA goal of reducing fire loss in those 14 years and younger. (USFA, Fire Research Agenda, pg. 3)

In April 1986, a student died of smoke inhalation in a dorm at Centre College and in recent years due to the loss of life in college dorms nationwide, the fire marshal provides incoming Centre College freshmen and resident assistants with basic dorm fire safety and fire extinguisher training. The department receives many fire alarms throughout the year at the college, with only one fire reported in the last ten years at a fraternity house. The fire safety

program along with better inspections of dormitories and fire notification and suppression equipment has dramatically dropped the fire injury and death rate at the college to zero percent. Annually, the fire marshal provides basic life safety classes aimed at older adults at the Boyle County Senior Citizen Center. This is the only time fire prevention is addressed with older adults. Currently the department does not have a program to address any special needs population with the exception of the program delivered at the Kentucky School for the Deaf.

The fire marshal also provides fire extinguisher classes to local industries to meet their basic Occupational Health and Safety Administration classes and provides the same classes to local businesses and to the healthcare field, if requested. These classes usually involve the basics of fire extinguisher operation utilizing the acronym P.A.S.S. (pull, aim, squeeze and sweep) and are aimed at adults. The number of classes given is a small ratio of the overall fire safety education program. This program is designed to minimize fire loss by providing a method where adults can control an incipient fire.

A performance measure was developed in 2008 to track how many fire and life safety contacts were made each year. The measure shows that most of the contacts are made during October to elementary age children during fire prevention month. The amount of contacts also includes children that do not live in the City of Danville corporate limits because many county residents children attend school in Danville. In 07/08 budget year, 1456 elementary student contacts were made during fire prevention month. The 08/09 budget year numbers were 1988 students, an increase of 432 students. This high percentile increase was attributed to better record keeping in student counts. The 2008 performance measurement data shows that fire extinguisher classes were delivered to 190 persons, mostly adults at local industries. Station visits counted for

224 persons which included both adults and children and 418 persons received fire and life safety classes with 325 of that 418 being Centre College students.

The fire inspection program is conducted by the fire marshal with some assistance from the fire chief and the administration chiefs. He coordinates the inspections with the state fire marshal office and is also trained as a Kentucky certified building inspector. A target of 40 inspections per month has been defined by a performance measurement set forth in the 2008 fiscal year. As of April 2009, 378 inspections had been completed.

Occupancies that receive inspection are business, commercial, assemblies and industrial. These inspections are performed utilizing the National Fire Protection Association (NFPA) codes 1 and 101. Fire inspections do reduce the number of fires by pro-active measures that prevent the fire before it occurs. It affects all types of buildings and persons and it is aimed at reducing a large loss of life from occurring at a single fire. One and two family dwellings, where most of fire injuries and deaths occur, only receive inspections by the building inspector when built. The fire marshal does not provide inspections of one and two family dwellings requested by the owner.

Suppression personnel conduct pre-fire plan program with coordination through administrative chiefs and the fire marshal. The department's standard operating guideline defines all target hazards are those exceeding 4000 square feet with the exception of one&two dwelling homes shall be preplanned. Currently there are 564 buildings within the city that meet this definition. Through the fire marshal, new occupancies are identified and added to the list every year. The department has identified those that receive annual or bi-annual updates based on their life hazard or target hazard issues. The department set forth a performance measure of pre-planning or updating those preplans as 300 per year. Suppression shifts are assigned 100 pre-fire

plans per year. Suppression personnel visit the building, check for changes in the building, check for accuracy of the building plot plan and update any information necessary. The pre-fire plan program is designed to reduce fire loss in those identified structures by planning ahead for fire suppression and mitigate fire loss.

The fire department, as by city ordinance, is designated to issue outside burn permits. This program allows for property owners to dispose of site-developed brush on their property by burning it. The ordinance prevents any other materials than those made of wood from being burned and follows Kentucky clean air guidelines. Persons contact the fire department and request a permit, and then the fire marshal or suppression supervisor visits the property and inspects the burn pile. If it meets regulations, a permit is issued to the owner. There is no cost to the owner and the program insures that the burn is conducted safely and should not cause any problems.

The burn permits are tracked by the number issued per month, and due to an ice storm in the winter of 2009, have been on the increase for most of the year. This year the department has issued 191 burn permits. This program addresses air quality, outside burning and safety to those individuals who are conducting the burning. It effectively controls the grass fires and wildland interface fires for all ages.

The car seat installment program was adopted in 2000 as a response to a city commissioner's request to begin the program. Firefighters are certified through a national organization as car seat technicians. The department provides this service free of charge. Persons wishing to have a car seat installed call the department and make an appointment. Firefighters place and install the seat in the vehicle while instructing the person on correct methods and safety issues. In 2008, 144 car seats were installed and as of September 2009, 115 have been

installed. This program addresses those from newborn to 8 years of age and adults who are charged with their safety while riding in a vehicle.

The results of this action research of this question show that the department is providing many worthy programs that are reducing fire loss and death in the general population. Contacts are made in school age children and adults less than 65 years of age but the department does not provide a measurable program to reduce those same losses in persons 65 years or older.

What are the high-risk populations within the City of Danville?

The National Fire Protection Association has identified that older adults are the age group with the highest risk of death from a fire. They face a risk 2.2 times higher than that of the general population (Flynn, 2008, p. 1). As age increases, so does the likelihood of dying in a fire due to physical and mental disabilities.

Research was conducted to identify the demographics of the City of Danville to define the population demographics and to determine the percentile of persons 65 and older. The data of the City of Danville's population statistics were gathered from the 2000 U. S. Census. The table below defines those demographics:

Population	Households in Community	Avg. Income	Percent of Households in poverty	Under 5 years Of age	Over 65 years of age
15477	14061	$32938	9.2%	858 5.5% of pop.	2519 16.3% of pop.

(United States Census Bureau, 2003, p. 1)

As noted in the table, 16. 3% of the population is 65 years and older. According to the U.S. Census projections, the percentage of Americans age 65 or older will increase from 12.4 percent in 2000, to 19.6 percent in 2030 (Humes, 2005, p. 464). This would be a projected increase of 7.2 percent in 20 years or 3.6 percent every ten years. The 2010 exact census data will not available until 2012. Therefore some assumptions are needed to properly evaluate the

current population. Focusing on the target group of 65-year-old adults, it can be summarized that the City of Danville's aging population is 3.9 percent greater than the national average. The city could realize a 500 to 600-person increase of 65 year older and adults based upon the projections of the U.S. Census of the 65-year and older population. Those figures need to be compared to the next census when it becomes available.

The City of Danville was recognized in 2009 as one of the Best U.S. cities to retire and live by "bestboomertowns.com" (Best Boomer Towns, 2009, p. 1). The city is promoted frequently as a retirement community through various media. Though data is not available, an assumption is made that the city may have a higher than national average of persons 65 and older living within the community in the next five to ten years.

The primary concern is that another projection made by the U.S. Census from 2002, is that 21 percent of adults 65 and older are living in poverty, an additional 10 percent were classified as low-income (Humes, 2005, p. 2), and the current economic crisis has more than likely affected this number considerably. Comparing the national rate to the local population, it can be then deduced that 781 persons 65 and older can be classified as low income or worse. This is 5 percent of the population.

A study of fire deaths and injury data was completed in 2009 for the City of Danville. In May of 2000, the department began utilizing a new National Fire Incident Reporting software program and all other data from previous years was archived or destroyed. The data presented is for the last nine years on response made to building fires. The department responded to 173 building fires during this time frame, an average of 19.22 structures fire per year. Data on severe injuries or deaths to civilians is listed in the following table:

Table #1

Age	Factor	Injury Related Death To fire	Fire/Cause	Other
41 female	Disabled, brain injury	N/A	Death by severe burns	Smoking related	Died three days after fire
48 male	Disabled, paralyzed	Severe Smoke inhalation	N/A	Electrical*	Hospitalized
70 female	elderly	Severe Smoke inhalation	N/A	Electrical*	Transported and released
29 female	Possible prescription drug use	Severe burns to lower torso	N/A	Unattended Cooking	Hospitalized
84 female	elderly	Severe Smoke inhalation	N/A	Unattended Cooking	Hospitalized

* Same structure fire, two victims

Searching in archived DFD records on building fires to 1992, the author found two other incidents of severe injuries or deaths in building fires: 69 year of age male, alcohol incapacitated, severe smoke inhalation cause, smoking related and a 71-year-old male, alcohol incapacitated, death, smoking related.

. As a side note, it was discovered from the data that there were four incidents of males, killed and burned in automobile crashes. In one single crash two males died in the same vehicle. The other two crashes were separate incidents where only one male died in each crash. Though interesting, the automobile crash/fire death data was not used in this study.

The ratio of severe injury or fire deaths to building fires since 2000 is that a severe injury or death occurs every 43.25 fires and accounting for the average fires per year, a severe injury or fire death occurs approximately every two and half years. The data also shows that fire deaths or severe injuries occurred in the city since 1992 were persons who either had special needs, were

chemically disabled and/or elderly and that the two smoking related fire deaths were the causal factor of the two fire deaths within the city.

The results are that persons 65 and older living within the City of Danville are on the increase and that smoking is the number one cause of fire deaths. Persons older than 65 and those that smoke are subject to higher increase of fire death and injury even though fire deaths are down nation wide.

Is a home smoke detector program the right program for high-risk population(s) identified?

The results have defined that those 65 and older are at greater risk to fire death and injury and that the department currently does not have a program that addresses fire prevention and life safety for these individuals. Therefore, the study must answer the question on what program best suits those 65 and older. Those programs identified are fire safety education, a home smoke detector program, and a home fire spinkler program.

Fire safety education is most effective when the person receiving the message can understand and implement the changes needed. Three learning domains are encountered in completing these changes: affective, psychomotor and cognitive (Fire Potection Publications [IFSTA], 2006, p. 141). Affective is the changing of attitude about the message, psychomotor is being able to physically make those changes and cognitive is the understanding of the changes and why they are needed. The challenge with those 65 and older is that the common methods used to reach the general population do not work as well on the older population.

“Naturally every elderly person has different physical and mental abilities. There are elders that run marathons, seniors that swim laps and people in their 80’s and 90’s with minds as sharp as they were in their earlier years. However, this is not the norm. Most people suffer from physical and/or mental decline as they age. The elderly often are afflicted with illnesses or

disabilities that limit their mobility to varying degrees, making escape from a fire more difficult" (LoveToKnow Corporation, 2006-2009, p. 1). Basic fire safety messages fall short for the elderly because the sender of the message relies on the encoder to have the faculties to receive the message and this may not be the case.

The following are factors that can prevent the message from being received. Diminished mental facilities due to depression, forms of dementia or Alzheimer's disease, slower reaction times, a reduction in the abilities of the five senses, and medications may have an affect on a senior citizens quick decision making ability (LoveToKnow Corporation, 2006-2009, p. 1). These factors also increase the odds of those 65 and older being injured or killed in a fire.

Although the fire safety education should still be done for those age 65 and older it is most likely the least effective in preventing death and injuries. It is the most cost effective program because literature and media allow for the program to be done inexpensively. It is least effective because unlike school children who are gathered in large amounts and are a captive audience, it is challenging to gather that same amount of people from the older generations.

A home smoke detector installment program is a reactive in that the alarms placed allow warning of a fire. The simple message is that when the detector sounds, exit the building. Individuals are contacted in their homes on a one-on-one basis instead of the masses and unlike the fire safety education actual results can be obtained and measured from the installment and tracking of the detectors. The learning domain is less challenged because there is less to remember.

A home smoke detector program for those 65 and older should include an explanation of the detector and how it works. This could be a challenge to those who suffer from diminshed faculties. Another problem with a home smoke detector program is that the occupant must be

ambulatory and be able to leave the building that is on fire. In the case of non-ambulatory occupants or persons with decreased mobiltiy, they still might not be able to escape when alerted to the presence of fire by the smoke detector.

The costs of a smoke detector program is greater than fire safety education and may involve seasonal visits by the fire department to replace the batteries. The home smoke detector program ranks second in fire safety programs for those 65 and older and is a reactive measure, It could be considered a band-aid due to the fact it does not stop the fire but only alerts of its presence.

A home sprinkler program is the best method to protect those 65 and older. Sprinklers are proactive in that they can control the fire when it starts thus protecting those individuals who suffer from mental or physical problems or both . The number one challenge to this program is the costs associated with installment and retrofitting homes with sprinklers. Most 65 and older are living on fixed incomes and cannot afford these costs. It is a contradictory course of action in that they need to be protected but the costs of home sprinklers does not allow them to receive the total protection they need even though they are a high-risk group. The result of this question is that, a home smoke detector program is the most feasible and cost effective of the three options and though reactive in nature, still can provide a manner of protection more than just fire safety education alone and beless expensive than a home sprinkler program.

Can a home smoke detector be implemented, measured and receive community support?

A home smoke detector program needs the following budgetary items to be implemented: trained personnel to install the detectors, smoke detectors and batteries, tools for installment, vehicles and fuel to transport installers to different locations, and fire prevention material to handout to the recipients of the detectors. Each of these items has a costing amount and must be

budgeted and accounted for, if the program is to be successful. Guidelines for installing the detectors and performance measurements are also necessary to track and measure the program.

An example of implementation of a home smoke detector program utilizing overtime suppression personnel that has a project goal of installing 100 battery powered smoke detectors in 50 days is provided. The potential costs for all of the material and labor would exceed $3750 dollars, or $37.50 per detector. This is based on $2500 in labor overtime costs to install at least two smoke detectors per day with an hour for each detector installment, $600 for the detectors and batteries, $400 for needed installment equipment and $250 for fuel with the department utilizing a current vehicle in the fleet. The costs savings could be realized if on duty personnel were utilized to install the smoke detectors and equipment in current inventory were used. With the cost of detector and fuel only, then the installment costs would only be $8.50 each.

Many times programs in small communities are introduced from different agencies to address community problems but little is done to determine what the communities' attitude is about the program. A community survey was developed to determine how citizens in the community perceive the fire department and what programs would be beneficial. Two more reasons for the survey, which are less commonly understood, are to get more group and community support for the actions that will soon be undertaken. That's because if people have stated a need for a particular course of action, they are more likely to support it. And, for the same reason: To get more people actually involved in the subsequent action itself (Laboratory for Community and Economic Development, 2008, p. 1). The final survey results are to be presented to the city commission.

Due to time considerations, the survey was posted on the Internet asking for input from those living and/or working in the community to determine who is utilizing the fire department

services. 258 citizens responded to the survey as of October 1, 2009. A set of demographic questions was included within the survey to determine who was responding to the survey. 77.2 percent of the respondents were from Danville or located within the county. Demographics revealed that 199 of the respondents were younger than 59 years of age and that 58 were older than 59 years of age for 28 % of persons that completed the survey. 15 persons responded that they have someone in their household with special needs. 179 responded that they did not have children living in the home 13 years and younger. English was the number one language spoken in the home and 224 responded they own their own home. An informational section was included with the survey to explain its' purpose and the project's appeal. Current service rating questions and a comments sections were also included win the survey. Appendix #1 shows the survey questions and results as of October 1, 2009.

The survey asked respondents if they had used the services of the fire department and to rate any services used. This question was placed in the survey to access the feeling of the respondents on current services provided. A comments section was placed in this part to allow respondents to identify any problems or positive things they had encountered. Question 12 asked was the department currently meeting the public needs. 79.8% of the respondents answered yes, 2.8% answered no, and 17.5% answered not sure with one person skipping the question.

Question #13 asked the respondents to identify other services needed or that could be best used by the community. The number one positive category was free Cardio-pulmonary resuscitation (CPR)/first aid programs. 199 respondents placed this in the positive category. CPR and first aid is now offered in the community by the local hospital, Red Cross, and the local emergency medical service (EMS). All of these classes are offered for a fee to cover the costs of

the classes. Occasionally, Danville Fire Department offers these classes for a fee but they are done on an as needed basis.

190 respondents responded positively for elderly check/welfare assistance. The police, with occasional fire and EMS support, usually handle this type of service. Many elderly live alone with little or no family for support so this service is used quite frequently. From January 2009 to September 2009, the Danville/Boyle County 911 call center had dispatched 65 calls for check welfare, but due to classification being very broad, a clear picture of the actual calls based on age groups could not be ascertained.

191 respondents answered positive for rapid response emergency medical service. This was surprising since the county operated EMS is located within the city limits and performs admirably and that when EMS calls exceed the ambulance service capabilities, the fire department is requested to respond as assist.

The free home smoke detector installment program had only 185 positive respondents and 34 negative responses. This was not a surprise, most fire departments in the area are volunteer departments and do not offer this type of program due to time and manpower considerations. There are only two other paid fire departments in the a 25 mile area and only one offers to install free home smoke detectors. There were no comments or other information why 34 respondents answered no.

As stated before, the survey did not get the required number of participants to qualify it. However, the survey did offer some insight to the department. The results showed as in fire suppression, life is valued more by the respondents than property. The survey does provide some support for a free smoke detector program and a program for the elderly by means of checking in on their welfare.

A home smoke detector program for those 65 and older can be measured in several facets. The first measurement and the one that is most scrutinized by the auditors is in cost of the program. The second measurement is in the amount of detectors installed. The third is in the number of injuries or deaths per capita in those homes that have smoke detectors with focus on those that are part of the free home smoke detector program**.**

To assist in these measurements other community organizations can assist and partner with the fire department. The author identified several organizations that can assist in making the program a success. Boyle County Senior Citizens, Boyle County Health Department, the Department for Community Based Services, and the Bluegrass Community Action Agency all have contact with those most likely in need of home smoke detectors and can assist in qualifying the targeted age group and provide support. These organizations as partners can be part of a consortium of stakeholders that measure the quality of life provided to those over 65.

What funding sources can be identified to implement the home smoke detector program?

The Danville Fire Department's budget for community risk reduction is spread over several line items. An analysis of the entire budget for measures that reduce community risk reduction was performed. Breakdowns of those budget items were defined as the fire marshal salary, fire prevention line item allocation and training needs. Danville Fire Department's budget in 09/10 is $2,578,342.37, which includes all personnel, programs and functions. The department provides fire suppression, EMS support, hazardous materials response, technical rescue as well as three charitable fundraisers, and several community programs, such as a car seat installment program. Obviously, each type of service provided by a fire department has associated risks, which must be considered as a community judges its level of protection and projects the protection level it would like to have. Just as obvious is the knowledge that cost must be

considered. This is a major reason why risk management is so closely tied to the assessment of community protection levels (Foley, 2006, p. 3).

A search of the internet of fifty cities across the nation of various sizes for fire prevention budget allocation pulled a median average of 5% of fire department's annual budgets were allocated to fire prevention. The author was not able to obtain clear data if each of those cities searched included salaries of personnel assigned to fire prevention or how each city defined what budget costs were associated with the 5%.

The cost per capita for the City of Danville Fire Department is $166.08 with 89.8% of the costs being allocated to support salaries and benefits. The cost per capita for fire prevention line item budget is 24 cents, with fifty-two percent of the costs going to promotional materials and/or curriculum for elementary grade students. Only .06 percent of the budget is allocated to promote and provide educational materials for fire prevention.

The major cost is the fire marshal's salary and benefit package. The total of the fire marshal salary and benefit package is $70,692.62 in 09/10 and tallying that with the fire prevention budget of $1800, a cost of all programs associated to the fire marshal would be $72,492.62. This would indicate that 2.8 percent of the fire department budget is dedicated **to** fire prevention**.** Illustrating, if the fire marshal position and job duties were consistent with the fire prevention defined as all duties to involve fire safety, the Danville Fire Department budget for fire prevention is 2.3 percent below average and the annual budget allocation should be $128,917.12. The amount difference is $56,424.50. This amount could potentially fund another position dedicated to fire prevention and safety education.

The funding for fire prevention line item is very limited and usually reserved for purchasing typical fire prevention materials such as pencils, erasers and candy. Every year a fire

prevention kit is purchased from The National Fire Protection Association (NFPA) that includes banners and campaign slogans. Funding allocations for fire prevention based on the last five years is shown below with a general category breakdown:

Budget Year	Fire Prevention Funding	Promotional Items Expense	Educational & Materials Expense	Props/other
05/06	$1500.00	$813	$155.47	$275.99
06/07	$1500.00	$560.68	0	$71.28* 440.16
07/08	$3800.00	$653.69	$814.43 $2414.08 **	$2962.37* $636.79
08/09	$1800.00	$1173.68	$421.08	$159.96
09/10	$1800.00	$620 YTD	$331.27 YTD	$165
5 Year Totals	*$10400.00*	*$3821.05*	*$907.82*	*$4711.55*
	Total amount spent on Fire Prevention/last five years = $9440.42 Total percent of fire prevention budget = 90.1%			

* $3033.65 spent for repairs to Fire Safety Trailer

**$2414.08 spent from excess Fire Grant on speaker system/display

In the last five years, $959.58 was not spent from the fire prevention budget mainly due a conservative budget approach by the department. This figure does not include the fire marshal's salary or benefits. An assessment of the work load and time allocation for the fire marshal position costing would need to be done to show what the true costs are with the occasional suppression staff's support. Most all other areas for community risk reduction are allocated in the training line item budget. The total costs of all other programs do not exceed $1000 per year.

The current dilemma of the city's budget does not allow for any new programs or new staffing. The number one cost to all cities budget is personnel salaries and benefits. Several cuts were made across the board in the 09/10 city budgets to makeup for lost revenue. Salaries and benefits make up the majority of the fire department's budget and overtime was trimmed substantially in the 09/10 budgets to reduce costs. Alternate funding must be utilized to fund this

program and on-duty personnel can fill the gap until funding can be allocated to focus more on fire safety programs.

Three programs were identified as potential sources for funding. The Kentucky Injury Prevention and Research Center (KIPRC), Federal Emergency Management Agency (FEMA) Fire Prevention and Safety Grant and the Lowe's Community Partnership Program could assist in providing funding for the smoke detector program.

The KIPRC is a partnership between the Kentucky Department of Health and the University of Kentucky College of Public Health. KIPRC provides funding through Smoke Alarm Installation and Fire Education (SAIFE) project, which is funded by the Center for Disease Control's (CDC) National Center for Injury Prevention and Control Kentucky Injury Prevention and Research Center KIPRC currently offers a limited number of smoke alarm mini-grants each year to local fire departments, public health departments and other local organizations promoting fire safety. These grants provide free smoke alarms and fire safety educational materials to agencies that will install the alarms in local residences and provide fire safety education in their community [KIPRC], 2008, p. 17). The department has applied for grants from this program in the last three years, but due to its limited funding of the grant has yet to be successful.

The FEMA grant funds several projects that address fire prevention and safety. One of the projects funded is a smoke detector installment program. This is a highly competitive process and the department has been turned down in the past for other projects for this grant. Danville Fire Department management decided this year it would seek funding to implement an arson task force due to several recent arsons and the lack of resources to investigate those arsons. This grant will not be utilized this year for the smoke detector program.

Lowe's, a building and home repair retail outlet, provides community support through a wide variety of programs. The Danville store sponsors a safety day every year and has been proactive in support of the community. Each year they are allocated funds by the corporate management to partner with the community. Lowe's did donate smoke detectors in the past, but due to the social-political climate, the city commission voted against the department participating in the program. The department began discussions with Lowe's management in 2009 once again, in hopes of partnering on a home smoke detector program. The partnership was forwarded to the corporate headquarters for review and funding allocation, but has not received word yet on whether they are willing to provide the funding.

Discussion

"If we are going to talk to the community about the benefits provided by a fire department, we can't focus entirely on emergency response. We have to focus on the total level of service being provided", (Coleman, 2007, ¶ 16). The level of service must meet the community's needs and be focused on reducing fire deaths and fire loss. In 1736, Ben Franklin organized Philadelphia's Union Fire Company, the first in the city. His famous saying, "An ounce of prevention is worth a pound of cure," was actually fire-fighting advice and aimed at fire prevention for the city (Independence Hall Association, 1995, ¶ 17). Fire prevention and fire safety education should be the number one goal of the fire department for several reasons, as proposed by Franklin. The goal being that every fire prevented is one that saves civilian lives, firefighter lives and property.

Many studies since the early 1980's have been conducted on the value of smoke detectors, the types needed and installment programs. Fire prevention and fire safety education has never been stronger throughout the United States. Building and Life Safety codes are

stronger. A national consensus on installing residential sprinklers gets stronger everyday. Fire deaths and injuries are on a decrease nationally. But improvement is still needed for a reduction in deaths.

On average in the United States in 2008, someone died in a fire about every 158 minutes, and someone was injured every 31 minutes. Four out of five U.S. fire deaths in 2008 occurred in homes (Karter, Jr., 2008, p. 14)**.** Smoking is the leading cause of fire-related deaths (Ahrens, 2009, p. 7)**.** Children under five and adults 65 and over face the highest risk of home fire death. Almost two thirds of home fire deaths occurred in homes without working smoke alarms. Approximately 4 out of 10 home fire deaths occur in homes without smoke alarms (National Fire Protection Association [NFPA], 2009, p. 1).

Kentucky ranks ninth in the United States for fire deaths and is the nation's leader in smoking-related deaths. One-third of all fire deaths in Kentucky are attributed to smoking. In 2009, there have been 20 fire fatalities in Kentucky, including 13 children. Many fire fatalities can be attributed to the lack of a properly installed and working smoke detector (Kentucky State Fire Marshal, 2009, ¶ 3). Statistics after statistics prove that there is more that can be done to improve safety within the home (NFPA, p. 1). Those 65 and older have been identified by the NFPA, USFA and the CDC as one of the high risk populations in the nation and the focus of many target programs and the least likey to have smoke detectors.

The findings, facts, citations, and studies are numerous in support of home smoke detector programs across the country. The discussions all support the use of home smoke detectors. Searches via the internet, documents and magazines will produce a large volume of information that points to the fire service as being the leading advocate in providing programs that offer free home smoke detectors.

The organizational implications of the results is that the Danville Fire Department is not providing a program to meet the fire safety needs and address the fire deaths and injuries of those 65 and older: 16.3% or greater of the population of Danville. The department must reassess it's priorities and begin focusing on this age group to be more responsive in meeting the community needs and do so economically. The department needs to be proactive and start addressing this problem.

Recommendations

As stated, the problem is Danville Fire Department does not have a home smoke detector program to reduce fire deaths and injuries. The purpose of this research was to provide the necessary data in starting this program in hopes of reducing fire loss and deaths. As more research was completed, the study became more focused on a specific population needs. The study defined that specific population as those 65 and older needing a fire safety and prevention program and that the best way to meet their needs was with a home smoke detector program.

The study identified the current programs conducted by the Danville Fire Department and what population and age groups were served and identified through demographics and that the population least served by the fire department was those 65 and older. The Danville Fire Department should focus efforts on providing fire safety to these persons, if not by a home smoke detector program, then by a program that reaches with public fire safety literature and education.

The study then defined that those 65 and older are the high-risk population. This is based on national, state and local data. The study also found that the last two recorded fire deaths in the City of Danville were persons who were smokers and that those most likely to receive injury were those 65 and older or those that are disabled. In a small town such as Danville, fire deaths

are usually infrequent but when they do occur, are more tragic due to the closeness of the community and the community usually rallies around efforts to prevent those deaths from reoccurring. The fire department must provide an aggressive means of educating those over 65, those who smoke, and those who have disabilities to prevent further tragedies from occurring.

A home smoke detector program for those 65 and older can be measured by defining a mission statement that defines goals and objectives of the program. Those measurements can come in several ways. The amount of detectors installed, the amount of those served by the installation and the reduction of fire deaths and injuries in those that have the detectors installed are just a few ways the program can be measured. Furthermore, contact is made with those persons who sometimes seem to slip out of society's grasp due to lower income or mobility problems. Those contacts may assist the community in providing better support for those types of individuals through other community programs.

The community should support this effort, once the effort is explained in the media and other social media. The focus should not be on the costs of the program but in the success of providing fire safety to those who are most vulnerable and less likely to ask for help. The department should continue to look for outside funding sources and support form the community and possibly build a coalition with community stakeholders to help better define all fire prevention and fire safety programs. Once a home smoke detector program gains ground and becomes implemented by addressing those over 65, the program should expand out to those in the low income and special needs population.

The Danville Fire Department does not have to reinvent the wheel. Several successful programs are currently in operation across the United States. A home smoke detector program that is established on a larger scale for those 65 and older and special needs populations is one

from the Lincoln Fire and Rescue Department in Lincoln, Nebraska. The program began as a study similar to this one with the goal of protecting high-risk groups for fire deaths and injuries (Lincoln Fire and Rescue, 2008, ¶ 6).

. Surveys should be done each year with better public education, to assist the department in strategic planning and to ascertain if the department is meeting expectations of the community. It should not be taken for granted by the fire department that it always know what is best for the population it serves.

The fire prevention budget should be increased when funding becomes available. The funding should be allocated as a minimum of 5% of the total fire department budget. The fire prevention budget allocation should be targeted for each programs needs. A full-time or part-time fire safety and prevention staff member should be added to the staff and dedicated to all fire and life safety programs. This will alleviate the multiple duties of the fire marshal and allow for a more focused effort in these areas. This position can also be more aggressive in applying for grants and other funding sources. Until this position can be funded, fire suppression personnel should be utilized to install the free home smoke detectors and provide basic fire safety to those 65 and older.

The Danville Fire Department should take immediate steps in implementing a home smoke detector installment and education program for those 65 and older and begin a systematic approach to provide detectors in all residents throughout the community and make sure that those detectors are in working order. All fire departments have two goals in common, to save lives and to save property. A home smoke detector program can and will do both.

Addendum

On October 9, 2009 The Kentucky State Fire Marshal's Office in partnership with Wal-mart provided 9000 free smoke detectors to the State of Kentucky Fire Service. The Danville Wal-mart was allocated 100 smoke detectors to give to the Danville Fire Department to address the 65 and older population and those in the low-income bracket. On October 12, 2009, after a successful lobby by the Danville Fire Chief, the Danville City Commission voted in favor of the Danville Fire Department to begin a home smoke detector installment program.

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Appendix 1

The City of Danville Fire Department Community Risk Reduction Survey

1. Do you live in?

answered question		**258**
skipped question		**0**
	Response Percent	**Response Count**
City of Danville corporate limits	53.1%	137
Junction City corporate limits	3.1%	8
City of Perryville corporate limits	1.6%	4
Boyle County (unincorporated area)	19.4%	50
Another county or city not listed	23.3%	60

2. How many people live in your household?

answered question		**258**
skipped question		**0**
	Response Percent	**Response Count**
1	13.2%	34
2	38.0%	98
3	20.5%	53
4	18.6%	48
5 or more	9.7%	25

3. How many people living in your household are 13 years old or younger?

answered question	**257**
skipped question	**1**

	Response Percent	Response Count
0	69.6%	179
1	12.1%	31
2	12.8%	33
3	3.5%	9
4	1.9%	5
5 or more	0.0%	0

4. How many people living in your household are 59 years old or older?

answered question	**257**
skipped question	**1**

	Response Percent	Response Count
0	77.4%	199
1	7.8%	20
2	13.6%	35
3	0.4%	1
4	0.8%	2
5 or more	0.0%	0

5. Do you have anyone in your household who has special needs? Examples would include: Hearing impaired, physical or mental disability, limited mobility or chronic disease.

answered question	**258**
skipped question	**0**

	Response Percent	Response Count
Yes	5.8%	15
No	94.2%	243

6. What language is most frequently spoken in your home?

answered question	**258**
skipped question	**0**

	Response Percent	Response Count
English	99.2%	256
Spanish	0.4%	1
French	0.4%	1
Japanese	0.0%	0
Chinese	0.0%	0
Other	0.0%	0

7. Do you rent, own your home or live with a friend or relative?

answered question	**257**
skipped question	**1**

	Response Percent	Response Count
Own	87.2%	224
Rent	10.5%	27
Live with a friend or relative	2.3%	6

8. Is your home a single family dwelling(House), duplex, condominium, or apartment?

answered question	**258**
skipped question	**0**

	Response Percent	Response Count
House	93.0%	240
Duplex	1.9%	5
Condominium	0.8%	2
Apartment	4.3%	11

9. Before reading the introduction to this survey, did you know what services the Danville Fire Department offered?

answered question	**256**
skipped question	**2**

	Response Percent	Response Count
Yes	53.9%	138
No	32.4%	83
Not sure	13.7%	35

10. Have you used any of the Danville Fire Department's services before? Please be sure and include Emergency Responses or other community services.

answered question	**256**
skipped question	**2**

	Response Percent	Response Count
Yes	43.0%	110
No	55.1%	141
Not sure	2.0%	5

11. Please rate the services that you have used:

answered question	**194**
skipped question	**64**

	Excellent	Good	Average	Below Average	Poor	N/A	Rating Average	Response Count
Commercial/Business Inspection	18.7% (31)	7.8% (13)	1.8% (3)	0.0% (0)	0.0% (0)	71.7% (119)	1.40	166
Fire/Life Safety Classes	24.2% (40)	7.9% (13)	1.8% (3)	1.2% (2)	0.6% (1)	64.2% (106)	1.49	165
Fire Station Visit	34.3% (58)	8.3% (14)	1.8% (3)	0.6% (1)	0.6% (1)	54.4% (92)	1.35	169
Fire Safety House	21.2% (33)	7.1% (11)	3.2% (5)	0.0% (0)	0.6% (1)	67.9% (106)	1.50	156
Child seat installment/education	20.6% (33)	4.4% (7)	1.3% (2)	0.0% (0)	0.6% (1)	73.1% (117)	1.35	160
American Flag Program	12.3% (19)	3.2% (5)	0.6% (1)	0.0% (0)	0.0% (0)	83.8% (129)	1.28	154
Pre-emergency planning	17.0% (27)	4.4% (7)	1.9% (3)	0.0% (0)	0.0% (0)	76.7% (122)	1.35	159
Fire hydrant inspection	15.5% (24)	7.7% (12)	2.6% (4)	0.0% (0)	0.0% (0)	74.2% (115)	1.50	155
Downtown Christmas Light Program	48.6% (87)	12.3% (22)	0.6% (1)	0.0% (0)	0.0% (0)	38.5% (69)	1.22	179
Charitable Fundraisers	29.6% (47)	8.8% (14)	2.5% (4)	0.6% (1)	0.6% (1)	57.9% (92)	1.43	159
Christmas Toy Programs	40.0% (68)	9.4% (16)	2.4% (4)	0.0% (0)	0.0% (0)	48.2% (82)	1.27	170

view Comments on the services you used: 34

12. Would you agree the Danville Fire Department offers services that currently meet our community's needs?

answered question		**257**
skipped question		**1**
	Response Percent	**Response Count**
Yes	79.8%	205
No	2.7%	7
Not sure	17.5%	45

13. What other services do you feel are needed or would be best used by our community? Listed below are some examples.

answered question							**245**
skipped question							**13**
	Most definitely should provide	**Maybe should provide**	**Probably should not provide**	**Should not provide**	**N/A**	**Rating Average**	**Response Count**
Rapid Response Emergency Medical Service	59.8% (131)	27.4% (60)	4.6% (10)	1.8% (4)	6.4% (14)	1.45	219
Free Home Smoke Detector installment program	36.6% (82)	46.0% (103)	10.3% (23)	4.9% (11)	2.2% (5)	1.83	224
Free CPR/First Aid programs	48.7% (112)	40.0% (92)	4.3% (10)	3.5% (8)	3.5% (8)	1.61	230
Fire Safety Street/Block parties for area neighborhoods	20.7% (44)	42.3% (90)	18.3% (39)	12.2% (26)	6.6% (14)	2.24	213
Elderly check/welfare/assistance program	43.5% (100)	40.9% (94)	9.6% (22)	2.2% (5)	3.9% (9)	1.69	230
Other services you feel we could provide:							22

14. What is your overall opinion of the Danville Fire Department?

answered question	**254**
skipped question	**4**

	Response Percent	Response Count
Excellent	55.5%	141
Good	30.7%	78
Average	5.5%	14
Below Average	0.8%	2
Poor	0.4%	1
No opinion	7.1%	18
Other (please specify)		10

15. May we contact you for more information?

answered question	**258**
skipped question	**0**

	Response Percent	Response Count
Yes	23.3%	60
No	76.7%	198

16. If you answered you would like to be contacted, please fill in your contact info, if you answered no to the contact information, you have completed our survey. Thanks for helping us by completing the survey and if you have any question you can contact us at 859-238-1211 or vist the City of Danville's website at http://www.danvilleky.org/

answered question	**61**
skipped question	**197**